mained invisible; and, consequently, I have no means of applying, as I hoped to do, any correction from observation to the calculated time given at the conclusion of my former paper.

Hopefield Observatory, 1862, *May* 3.

In a letter to the Editor, dated 26th May, Mr. Dawes writes that on the 17th he made a capital observation of the transit of *Titan's* shadow; and that on the 25th he watched an *immersion* of that satellite into the *shadow* of *Saturn*.

Transit of Mercury of 11th November, 1861.

(*Extract of a Letter from Charles Todd, Esq., Observatory and Telegraph Department, Adelaide, to the Astronomer Royal, dated* 1861, *Nov.* 26.)

I had a glorious day for observing the transit of *Mercury* on the 12th instant (11th G. T.), with a Dollond of $2\frac{1}{4}^{in}$ aperture.

	h m s	
Total Ingress	2 34 12	A.M.T., very exact.
Egress, int. cont.	6 30 29	A.M.T., rather doubtful; Sun low.
Total Egress	6 32 19	A.M.T., very doubtful; limb boiling; Sun near setting.

Some very fine large clusters of spots on the Sun.

Observations of Comet II. 1861, *made with the Northumberland Equatoreal at the Cambridge Observatory.* By J. C. Adams, Esq., Director of the Observatory.

	G.M.S.T. 1861.	Observed R.A.	Parallax × Δ	Observed N.P.D.	Parallax × Δ
d	h m s	h m s		° ′ ″	
June 30	11 6 7·4	6 40 14·94	+0·127	43 25 37·1	−8·343
	11 19 51·1	6 40 40·50	+0·099	43 19 35·0	−8·391
July 2	10 41 46·6	8 30 28·47	+0·541	...	...
	10 57 47·4	..	..	27 36 40·5	−6·571
3	9 57 55·6	9 39 53·92	+0·822	24 10 11·5	−4·128
	11 4 52·4	9 43 15·42	+0·726	24 4 38·6	−5·330
5	10 29 33·1	11 44 52·88	+0·868	23 38 32·8	−2·301
8	9 54 51·8	13 17 34·82	+0·624	27 54 50·1	−0·573
	10 53 7·9	13 18 22·15	+0·706	27 58 30·1	−1·627
9	11 4 31·9	13 35 4·31	+0·673	29 23 45·7	−1·767
	11 56 10·5	13 35 36·11	+0·709	29 26 47·9	−2·768
10	11 7 1·7	13 47 55·32	+0·641	30 40 45·8	−1·800
13	11 22 27·6	14 13 11·05	+0·588	33 47 49·3	−2·208

		G.M.S.T. 1861.	Observed R.A.	Parallax × Δ.	Observed N.P.D.	Parallax × Δ.
	d	h m s	h m s		° ′ ″	
July	23	10 32 49·0	14 46 40·09	+0·469	39 26 26·8	−2·151
	26	10 32 17·3	14 51 52·27	+0·466	40 27 2·2	−2·369
	27	10 33 40·2	14 53 23·97	+0·469	40 44 52·1	−2·456
	31	10 26 32·3	14 58 53·10	+0·462	41 47 58·5	−2·630
Aug.	1	10 35 45·8	15 0 8·70	+0·473	42 2 10·6	−2·835
	2	10 32 1·3	15 1 21·77	+0·469	42 15 28·0	−2·850
	6	10 6 13·3	15 5 58·48	+0·448	43 3 51·5	−2·718
	8	11 36 5·3	15 8 15·87	+0·508	43 26 28·1	−4·273
	13	10 50 16·2	15 13 38·37	+0·489	44 14 56·1	−3·837
	14	10 5 46·4	15 14 40·53	+0·459	44 23 31·9	−3·202
	15	10 17 49·8	15 15 45·60	+0·470	44 32 18·2	−3·444
	16	10 9 30·0	15 16 49·44	+0·404	44 40 41·4	−3·375
	19	10 29 28·4	15 20 3·57	+0·480	45 4 48·1	−3·860
	20	10 17 53·8	15 21 7·81	+0·474	45 12 18·1	−3·735
	21	9 22 2·6	15 22 10·59	+0·429	45 19 26·2	−2·960
	23	9 45 40·3	15 24 22·39	+0·454	45 33 50·1	−3·414
	24	9 31 49·0	15 25 27·54	+0·443	45 40 36·9	−3·265
	27	10 12 6·3	15 28 50·08	+0·475	46 0 31·3	−4·034
	28	10 12 2·4	15 29 57·85	+0·476	46 6 45·7	−4·088
	30	9 22 4·7	15 32 10·76	+0·445	46 18 33·4	−3·437
Sept.	3	9 57 56·4	15 36 50·93	+0·472	46 40 58·0	−4·183
	6	8 47 24·9	15 40 21·31	+0·427	46 55 58·1	−3·285
	7	9 17 36·4	15 41 35·06	+0·453	47 0 49·0	−3·770
	9	8 45 16·6	15 43 59·40	+0·431	47 10 1·5	−3·394
	10	9 44 31·5	15 45 16·09	+0·470	47 14 35·8	−4·323
	11	9 19 54·9	15 46 29·07	+0·460	47 18 47·9	−3·996
	12	10 24 59·8	15 47 46·77	+0·477	47 23 9·1	−5·047
	13	10 37 13·6	15 49 3·41	+0·475	47 27 11·9	−5·284
	14	9 45 6·2	15 50 16·27	+0·472	47 30 53·2	−4·521
	23	10 12 4·0	16 2 1·87	+0·470	47 59 51·8	−5·342
Oct.	9	9 30 36·3	16 24 25·11	+0·467	48 25 8·7	−5·358
	11	8 57 45·5	16 27 20·63	+0·468	48 25 45·7	−4·935
	12	10 38 55·7	16 28 56·26	+0·429	48 25 51·1	−3·473
	14	9 55 27·1	16 31 52·46	+0·452	48 26 0·1	−5·918
	15	9 14 45·4	16 33 20·43	+0·466	48 25 40·7	−5·342
	16	8 32 50·6	16 34 47·90	+0·467	48 25 22·8	−4·740
	23	8 21 25·1	16 45 33·56	+0·469	48 18 53·2	−4·813
	28	7 35 56·1	16 53 23·50	+0·460	48 10 7·4	−4·290
Nov.	1	7 36 39·0	16 59 49·13	+0·465	48 0 34·7	−4·426
	2	8 57 36·6	17 1 31·62	+0·464	47 57 36·8	−5·698
		9 1 53·1	17 1 32·41	+0·462	47 57 37·9	−5·761
	5	8 3 14·1	17 6 21·53	+0·473	47 48 43·1	−4·959
	6	7 52 51·5	17 7 59·25	+0·473	47 45 28·2	−4·830

		G.M.S.T. 1861.	Observed R.A.	Parallax × Δ.	Observed N.P.D.	Parallax × Δ.
	d	h m s	h m s		° ′ ″	
Nov.	7	8 2 21·5	17 9 38·79	+0·474	47 41 56·1	−5·008
	9	8 43 42·4	17 13 1·20	+0·466	47 34 15·6	−5·721
	11	8 38 55·1	17 16 20·95	+0·465	47 26 31·6	−5·689
	20	6 53 55·6	17 31 30·01	+0·476	46 43 49·4	−4·315
	23	7 49 1·8	17 36 44·66	+0·482	46 26 28·5	−5·327
	27	6 55 5·0	17 43 39·16	+0·485	46 2 18·8	−4·507
	28	6 56 14·3	17 45 24·37	+0·486	45 55 48·9	−4·554
	30	7 58 3·9	17 48 59·05	+0·479	45 42 56·9	−5·575
Dec.	3	7 27 26·7	17 54 16·40	+0·490	45 21 10·9	−5·193
	4	7 55 49·1	17 56 5·36	+0·480	45 13 45·6	−5·653
	5	8 7 48·6	17 57 53·10	+0·472	45 6 8·5	−5·882

The foregoing values were deduced as follows:—

		R.A. Comet — Star.	No. of Comp.	N.P.D. Comet — Star.	No. of Comp.	Star.
	d	m s		′ ″		
June	30	− 6 1·85	1	− 7 37·2	1	*a*
		−11 50·63	1	−31 27·0	1	*b*
July	2	−11 26·54 − 8 10·07	3	..	..	*c* *d*
				+ 5 23·9 − 2 54·2	2	*c* *d*
	3	−28 2·06	1	− 1 49·4	1	*e*
		+ 3 46·57	3	+18 55·2	3	*f*
	5	− 4 25·66	6	−20 23·8	6	*g*
	8	−27 41·47	1	+ 5 53·8	1	*h*
		+ 3 2·19	5	+ 6 13·7	5	*i*
	9	−29 25·99	1	−36 22·5	1	*k*
		− 3 33·03	2	+17 31·6	2	*l*
	10	+ 2 11·99	6	− 5 28·7	6	*m*
	13	− 6 13·30	4	+ 0 24·9	4	*n*
	23	− 5 8·51	4	−21 37·8	4	*o*
	26	− 5 2·31	7	+11 44·6	7	*p*
	27	+ 5 42·19	4	− 0 32·1	4	*q*
	31	− 0 21·65	11	− 0 9·5	11	*r*
Aug.	1	+ 0 53·98	6	+14 2·6	6	*r*
	2	+ 5 25·25	6	+ 5 11·4	6	*s*
	6	+ 1 54·96	8	+ 4 32·4	8	*t*
	8	− 5 18·81	3	−25 49·5	3	*u*
	13	− 5 47·78	6	+ 0 51·3	6	*v*
	14	− 4 45·59	2	+ 9 27·1	2	*v*
	15	+ 1 48·85	8	+ 3 47·8	8	*w*
	16	+ 2 52·72	6	+12 10·9	6	*w*
	19	− 1 12·06	8	− 7 43·3	8	*x*

	d	R.A. Comet — Star. m s	No. of Comp.	N.P.D. Comet — Star. ′ ″	No. of Comp.	Star.
Aug.	20	+ 0 59·93	8	+ 3 45·8	8	*y*
	21	+ 0 55·02	8	+ 6 54·8	8	*x*
	23	+ 2 42·01	8	+ 3 30·7	8	*z*
	24	+ 3 47·18	8	+ 10 17·3	8	*z*
	27	− 4 51·96	6	+ 4 7·9	6	*a a*
	28	− 3 44·16	6	+ 10 22·2	6	*a a*
	30	+ 1 44·81	8	− 3 36·4	8	*b b*
Sept.	3	+ 2 3·92	6	− 10 3·6	6	*c c*
	6	− 1 9·31	6	− 9 53·5	6	*d d*
	7	− 4 41·08	6	− 0 3·6	6	*e e*
	9	− 2 16·69	6	+ 9 8·7	6	*e e*
	10	− 2 37·66	6	+ 5 12·8	6	*f f*
	11	− 1 24·66	6	+ 9 24·8	6	*f f*
	12	− 0 6·93	8	+ 13 45·9	8	*f f*
	13	+ 1 9·73	6	+ 17 48·5	6	*f f*
	14	+ 2 22·62	6	+ 21 29·7	6	*f f*
	23	− 2 36·92	4	− 32 34·3	4	*g g*
Oct.	9	+ 1 46·87	8	− 1 15·5	8	*h h*
	11	− 4 43·97	6	+ 6 7·8	6	*i i*
	12	− 3 8·32	2	+ 6 13·0	2	*i i*
	14	− 5 44·14	4	− 6 20·8	5	*k k*
	15	− 4 16·15	6	− 6 40·4	6	*k k*
	16	− 2 48·66	8	− 6 58·4	8	*k k*
	23	+ 1 0·70	6	+ 13 15·6	6	*l l*
	28	− 2 20·76	8	− 10 55·2	8	*m m*
Nov.	1	+ 0 57·26	8	+ 6 18·9	8	*n n*
	2	− 0 34·14	7	− 0 6·2	7	*o o*
		+ 2 40·55	2	+ 3 21·9	2	*n n*
	5	− 2 47·38	8	+ 4 58·1	8	*p p*
	6	− 1 9·64	7	+ 1 42·9	7	*p p*
	7	+ 0 29·91	9	− 1 49·5	9	*p p*
	9	+ 2 39·71	4	− 3 46·3	3	*q q*
	11	− 0 48·10	9	− 9 12·8	9	*r r*
	20	+ 1 1·34	8	+ 13 17·5	8	*s s*
	23	+ 0 19·00	6	− 0 59·9	5	*t t*
	27	− 0 15·83	8	+ 11 34·8	6	*u u*
	28	+ 1 29·36	8	+ 5 4·7	6	*u u*
	30	− 0 51·62	8	− 5 34·2	6	*v v*
Dec.	3	− 1 9·17	8	+ 4 43·9	6	*w w*
	4	+ 0 39·79	8	− 2 41·7	6	*w w*
	5	+ 2 27·53	8	− 10 19·1	6	*w w*

The determinations of N.P.D. from July 2 to July 9, inclusive, are liable to some uncertainty, in consequence of the defective state of the clamp by

which the declination-rod was attached to the polar frame. The determinations of R.A., however, are trustworthy.

The R.A. and N.P.D. for July 2 are obtained by taking a mean between the results of the comparisons with (*c*) and (*d*).

It is probable that in the observation of Nov. 30 the recorded micrometer-reading was too great by 5 revolutions, and that the N.P.D. should consequently be diminished by $5^r = 43''{\cdot}2$.

Assumed Mean Places of the Stars of Comparison for 1861·0.

Star.	R.A. 1861·0. h m s	N.P.D. 1861·0. ° ′ ″	Authority.
a	6 46 15·02	43 33 14·32	Johnson 1841
b	6 52 29·36	43 51 2·00	Arg. 7473
c	8 41 53·41	27 31 18·42	Johnson 2212
d	8 38 36·47	27 39 33·30	Arg. 9299
e	10 7 54·05	24 12 1·81	Johnson 2464
f	9 39 26·98	23 45 44·11	,, 2396
g	11 49 16·42	23 58 58·28	Arg. 12183–84
h	13 45 13·86	27 48 58·73	Johnson 3103
i	13 15 17·63	27 52 18·45	Arg. 13563
k	14 4 27·81	30 0 10·61	Johnson 3147
l	13 39 6·75	29 9 18·43	,, 3084
m	13 45 40·92	30 46 16·61	,, 3104
n	14 19 21·88	33 47 26·83	Arg. 14545
o	14 51·46·18	39 48 7·45	Johnson 3293
p	14 56 52·21	40 15 20·75	Arg. 15039
q	14 47 39·45	40 45 27·01	,, 14924–5 and 6
r	14 59 12·46	41 48 11·30	Johnson 3318
s	14 55 54·28	42 10 19·81	,, 3306
t	15 4 1·33	42 59 22·55	Arg. 15138, 39 & 4
u	15 13 32·48	43 52 21·45	,, 15266
v	15 19 24·05	44 14 8·99	,, 15347
w	15 13 54·71	44 28 34·20	,, 15272
x	15 21 13·64	45 12 35·38	Johnson 3385
y	15 20 5·93	45 8 36·32	Arg. 15355
z	15 21 38·49	45 30 23·41	Johnson 3387
a a	15 33 40·19	45 56 27·99	,, 3423
b b	15 30 24·17	46 22 13·89	,, 3413
c c	15 34 45·30	46 51 5·65	,, 3431
d d	15 41 28·95	47 5 56·02	,, 3448
e e	15 46 14·48	47 0 57·43	,, 3462
f f	15 47 52·16	47 9 27·67	,, 3464
g g	16 4 37·39	48 32 30·79	H. C. 29530
h h	16 22 37·14	48 26 28·41	,, 30042
i i	16 32 3·53	48 19 43·04	Eq. Comparison.
k k	16 37 35·56	48 32 26·10	H. C. 30489
l l	16 44 32·00	48 5 41·91	,, 30687

Star.	R.A. 1861·0. h m s	N.P.D. 1861·0. ° ′ ″	Authority.
m m	16 55 43·43	48 21 7·36	H. C. 31031
n n	16 58 51·13	47 54 20·14	B. Z. 426. $16^h 57^m 41^s$
o o	17 2 5·02	47 57 47·50	Eq. Comparison.
p p	17 9 8·21	47 43 49·86	H. C. 31417
q q	17 10 20·85	47 38 5·93	,, 31456
r r	17 17 8·42	47 35 49·01	,, 31697
s s	17 30 28·18	46 30 36·13	,, 32154 and 5
t t	17 36 25·19	46 27 32·75	Johnson 3741
u u	17 43 54·58	45 50 48·38	,, 3763
v v	17 49 50·27	45 48 35·65	B. Z. 478. $17^h 47^m 53^s$
w w	17 55 25·32	45 16 31·59	Eq. Comparison.

The place assumed for the star (*i i*) is derived from equatorial comparisons made on Oct. 15 with H. C. 30489. The place of (*o o*) is derived from equatorial comparisons made on Nov. 20 with B. Z. 426. $16^d 57^m 41^s$, and the place of (*w w*) from equatorial comparisons with Johnson 3795 made on Feb. 20, 1862.

The observations up to July 13 were made by Professor Challis, and the subsequent ones by Mr. Bowden, the senior Assistant at this Observatory.

Cambridge Observatory,
April 25th, 1862.

Observations of Encke's Comet. By W. Scott, Astronomer for New South Wales.

(*Extract of a Letter to the Astronomer Royal, dated Observatory, Sydney, March 22*, 1862.)

"I send you herewith the only good observations I have been enabled to obtain of Encke's Comet. The weather has been cloudy or hazy for the last two months, and the Comet was, at the best, very indistinct and ill defined.

Observations of Encke's Comet with the 7-inch Equatoreal and Ring-Micrometer.

Greenwich M.T. d h m s	R.A. Comet − Star. m s	Decl. Comet − Star. ′ ″	Star.
Feb. 23 5 45 14	−5 37·7	+4 25	*a*
53 24	−1 37·8	−0 3	*b*
6 1 36	−1 36·3	−0 13	*b*
7 6	−1 35·7	+0 7	*b*
11 31	−1 36·0	+0 3	*b*
11 31	−5 35·1	+4 5	*a*

Stars of Comparison; *a*, B.A.C. 7216; *b*, 8th mag.
R.A. $20^h 38^m 22^s$; Decl. −25° 25′.